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Why Is This Peter Thiel-Backed Startup Mining Bitcoin In West Texas?



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Energy



Cattle graze at the Buffalo Gap Wind Power project near Abilene, Texas. CORBIS VIA GETTY IMAGES

To make money mining cryptocurrencies you need fast microprocessors and cheap electricity to run them. It also helps to be in a cold climate, because a roomful of computers puts out a lot of heat, which slows them down. That's why the world's biggest miners tend to set up shop in places like Iceland, with its plentiful geothermal power, or Washington state and upstate New York, which enjoy cheap hydropower.

That's why it seemed odd that a crypto-mining startup called Layer1 Technologies chose as its center of operations an empty part of west Texas, which suffers through 90-degree-plus days for nearly half the year. Even in February it can get hot. "I was shvitzing," says Alex Liegl, CEO of Layer1, who was out there recently 100 miles west of Midland setting up the company's first two bitcoin factories — 20-by-8 shipping containers chock full of bitcoin miners. "If they were air-cooled, the processors would burn up," he says. But they're not. Instead, the mining machines are immersed in vats of liquid — a non-conductive solution that keeps them cool.

Why go to the trouble? Because the real draw of west Texas is its cheap power. We're not talking about the Texas mainstays of oil and gas, but rather wind. Texas is **by far** the biggest wind power generator in the United States, with 29,000 megawatts installed and 7,600 mw under construction. If the Lone Star state were its own country it would **rank fifth** in wind power worldwide. When the gusts come at night the power generated is often so plentiful that grid operators have to pay customers to use it.

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This gets crypto miners excited. "It's the cheapest power in the world, at scale," says Liegl, 27, who co-founded Layer1 in 2017 years ago alongside Jakov Dolic, who previously cofounded what's said to be the world's biggest bitcoin cloud mining service provider, called Genesis Mining.

Last year Layer1 received a \$50 million cash infusion from its v.c. investors led by billionaire Peter Thiel, alongside Shasta Ventures and Digital Currency Group. That raise valued Layer1 at \$200 million, and gave Liegl the capital he needed to acquire an entire electric substation capable of handling 100 megawatts, and 30 acres of land on which they aim to install a

village consisting of dozens of their container-based bitcoin factories, each of which draws 2.5 mw (enough to power more than 1,000 homes).

Liegl's strategy is to make Layer1 independent of any third-party suppliers or service providers. That way he can be certain that even when bitcoin prices surge and suppliers hike their prices, Layer1's economics will be insulated. That's why the company is manufacturing its own processors and outfitting its own containers in factories in China and Croatia. "We want to avoid all edge risks and be at the point where no one can take away our advantage."



Alex Liegl COURTESY LAYER1

There's a power arbitrage opportunity as well. In the summertime when air conditioners in Dallas, Houston and Austin are going full tilt, Texas electricity prices sometimes surge to nosebleed levels. When that happens, Layer1 will be able to make more money by shutting off its mining machines and allowing the power to flow through its substation to the grid. "We can stabilize the grid by selling capacity for curtailment at the push of a button," says Liegl.

Liegl grew up in Germany then studied math and philosophy at Stanford. He was first exposed to bitcoin during a stint working on the special investments desk at the Stanford Management Company (which boasts a \$27 billion endowment). He describes Peter Thiel as an "invigorating conversationalist, who traces the logic tree then proceeds" and who sees bitcoin as a useful hedge against central bank policy missteps. Liegl credits Thiel's investment as enabling Layer1 to gain a first mover advantage on their liquid cooled mining machines. It's easier to keep liquid chilled than air, and Liegl claims that Layer1 is able to "overclock" its processors, essentially running them at twice the rate they would be able to in an air-

conditioned space. What's more, the liquid keeps away the dust, which along with tumbleweeds is in no short supply.



Another startup: Peter Thiel and Elon Musk at the launch of PayPal, 2000. ASSOCIATED PRESS

Liegl is convinced that his machines will avoid obsolescence for at least 5 years because chip cycles have lengthened. “Chips have little differentiation now; cheaper electricity and more efficient cooling is most important.”

Layer1 won't say how many bitcoin it expects to mine in Texas this year. Liegl says they're profitable enough that he's already thinking about pursuing an IPO in order to “scale nonlinearly” and potentially fill the “vacant position of being the bitcoin mining company.” He envisions in time having enough machines to consume 1 gigawatt of power.

And what happens if they run out of cheap wind? “My personal dream is to own a nuclear plant in the future.”

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